What is claimed is:

1. A rotating table apparatus having a driven shaft supported by a housing and driven by a driving means, and a rotating table which is rotatingly driven by said driven shaft using a cam and cam followers;

wherein the rotating table apparatus has an opposing surface which opposes an end surface of the rotating table in a direction along a rotation shaft of said rotating table, and oil intervenes between the opposing surface and said end surface.

- 2. A rotating table apparatus according to claim 1, wherein there is provided a space which is 0.005 mm or more and 0.2 mm or less in between said opposing surface and said end surface.
- 3. A rotating table apparatus according to claim 2, wherein said opposing surface is a part of said housing.
- 4. A rotating table apparatus according to claim 3, wherein oil for lubricating said cam and said cam followers is provided in said housing, and a portion of oil intervenes between said opposing surface and said end surface.
- 5. A rotating table apparatus according to claim 4, wherein said cam is a roller gear cam and said rotating table intermittently rotates.
- 6. A rotating table apparatus according to claim 5, wherein a tool is provided in said rotating table.
- 7. A rotating table apparatus according to claim 5, wherein said rotating table is provided with a chuck for chucking a workpiece to be a processing object.